

What is claimed is:

1. A device for automatically detecting picture degradation caused by video transmission, comprising:

5 a first feature quantity extraction part that is provided on a transmitting side and extracts a feature quantity in a small region in a frame;

a second feature quantity extraction part that is provided on a receiving side and extracts a feature quantity in the small region in the frame; and

10 a monitoring chamber that receives the feature quantities extracted by the first and second feature quantity extraction parts through a data circuit,

wherein the monitoring chamber includes:

15 a degradation calculation part that compares the feature quantities received from the first and second feature quantity extraction parts and finds a degree of picture quality degradation; and

20 a median filter that finds a median of the degree of picture quality degradation among a small region to be noticed and its predetermined neighboring small region to be noticed as the degree of picture quality degradation of the small region to be noticed,
wherein local picture quality degradation of a picture can be detected.

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2. The device for automatically detecting picture

degradation of claim 1, further comprising a degraded region
detection part that detects a region having a larger degree of
picture quality degradation than a predetermined threshold,
wherein a region where the picture quality degradation is caused
5 by video transmission is detected.

3. The device for automatically detecting picture
degradation of claim 1, wherein the first and second feature
10 quantity extraction parts find the feature quantity on the basis
of spread spectrum and Walsh Hadamard transformation.

4. The device for automatically detecting picture
15 degradation of claim 2, wherein the first and second feature
quantity extraction parts find the feature quantity on the basis
of spread spectrum and Walsh Hadamard transformation.

20 5. The device for automatically detecting picture
degradation of claim 1, wherein the median filter finds a median
of the degrees of picture quality degradation among the small
regions belonging to a range in a horizontal direction.

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6. The device for automatically detecting picture
degradation of claim 2, wherein the median filter finds a median

of the degrees of picture quality degradation among the small regions belonging to a range in a horizontal direction.

5 7. The device for automatically detecting picture degradation of claim 1, further comprising a picture quality degradation detection part for detecting an average degree of picture quality degradation in a frame, wherein the local picture quality degradation and the picture quality degradation of the
10 frame is detected at the same time.

 8. The device for automatically detecting picture degradation of claim 2, further comprising a picture quality
15 degradation detection part for detecting an average degree of picture quality degradation in a frame, wherein the local picture quality degradation and the picture quality degradation of the frame is detected at the same time.